DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

STRATIGRAPHIC CROSS SECTION L – L' SHOWING ELECTRIC LOGS OF UPPER CRETACEOUS AND OLDER ROCKS, POWDER RIVER BASIN, JOHNSON, CAMPBELL, AND WESTON COUNTIES, WYOMING

BY JAMES E. FOX 1987

This cross section was prepared in part for the Evolution of Sedimentary Basins Program.

F 1

L

SYSTEM OR SERIES

UPPER CRETACEOUS

L 108
TRUE 24-23 BROYLES FED.
SE SW SEC. 23, T. 41 N., R. 79 W.,
JOHNSON COUNTY, WYOMING
KB 4772'

L 109
MITCHELL 1 TAYLOR RANCH
SE SE SEC. 9, T. 42 N., R. 76 W.,
CAMPBELL COUNTY, WYOMING
KB 5051'

L 110
MIAMI 1 CAMBLIN
NW NW SEC.4, T. 43 N., R. 75 W.
CAMPBELL COUNTY, WYOMING
KB 5499'

L 111
ROYAL RESOURCES 1-30 SOUTH
NW NW SEC. 30, T. 45 N., R. 73
CAMPBELL COUNTY, WYOMING
KB 4928'

LANCE FORMATION AND FOX HILLS SANDSTONE, UNDIVIDED
LEWIS SHALE
TECKLA SANDSTONE MEMBER
TEAPOT SANDSTONE MEMBER
PARKMAN SANDSTONE MEMBER
SUSSEX SANDSTONE MEMBER
MESAVERDE FORMATION
BASE OF ARDMORE BENTONITE BED
SUSSEX SANDSTONE MEMBER
SHANNON SANDSTONE MEMBER
STEELE SHALE
NIOBRARA FORMATION
SAGE BREAKS SHALE
WALL CREEK SANDSTONE MEMBER
FRONTIER FORMATION

OPEN-FILE 86-465L

U.S. Geological Survey
OPEN FILE REPORT
This map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards.

L'

L 110

MIAMI 1 CAMBLIN
NW NW SEC. 4, T. 43 N., R. 75 W.
CAMPBELL COUNTY, WYOMING
KB 5499'

L 111

ROYAL RESOURCES 1-30 SOUTHLAND ROYALTY FED.
NW NW SEC. 30, T. 45 N., R. 73 W.,
CAMPBELL COUNTY, WYOMING
KB 4928'

L 112

SUPERIOR 1 CHORNEY-GOVT.
NE NE SEC. 30, T. 46 N., R. 72 W.,
CAMPBELL COUNTY, WYOMING
KB 4847'

L 113

COQUINA 1 RENE-FED.
NE NE SEC. 18, T. 46 N., R. 69 W.,
CAMPBELL COUNTY, WYOMING
KB 4888'

L 114

ECHO 34-14 KEELINE
SW SE SEC. 14, T. 46 N., R. 68 W.,
WESTON COUNTY, WYOMING
KB 4868'

L 115

VAUGHN 1 MATERI
SW SE SEC. 2, T. 47 N., R. 66 W.,
WESTON COUNTY, WYOMING
KB 4551'

LANCE FORMATION AND FOX HILLS SANDSTONE, UNDIVIDED

LEWIS SHALE

TECKLA SANDSTONE MEMBER

TEAPOT SANDSTONE MEMBER

MESAVERDE FORMATION

PARKMAN SANDSTONE MEMBER

SUSSEX SANDSTONE MEMBER

STEELE SHALE

NIOBRARA FORMATION

SAGE BREAKS SHALE

WALL CREEK SANDSTONE MEMBER

FRONTIER FORMATION

LANCE FORMATION AND FOX HILLS SANDSTONE, UNDIVIDED

RED BIRD SILTY MEMBER

MITTEN MEMBER

BASE OF ARDMORE BENTONITE BED

GAMMON FERRUGINOUS MEMBER

NIOBRARA FORMATION

CARLILE SHALE

TURNER SANDY MEMBER

POOL CREEK SHALE MEMBER

GREENHORN LIMESTONE

BELLE FOURCHE SHALE

PIERRE SHALE

SUSSEX SANDSTONE MEMBER EQUIVALENT

F-2

ROCKS, POWDER RIVER BASIN, JOHNSON, CAMPBELL, AND WESTON COUNTIES, WYOMING

BY JAMES E. FOX 1987

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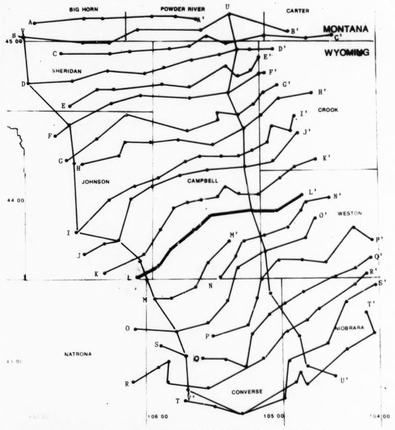


Map showing locations of selected wells drilled for oil and gas in the Powder River basin.

EXPLANATION

Correlation line at Group, Formation, Member, or bentonite boundaries --- Queried where correlation is uncertain.

Correlation along an unconformity --- Queried where correlation is uncertain.

* Widely used subsurface terminology.

Datum is top of Lower Cretaceous Mowry Shale.

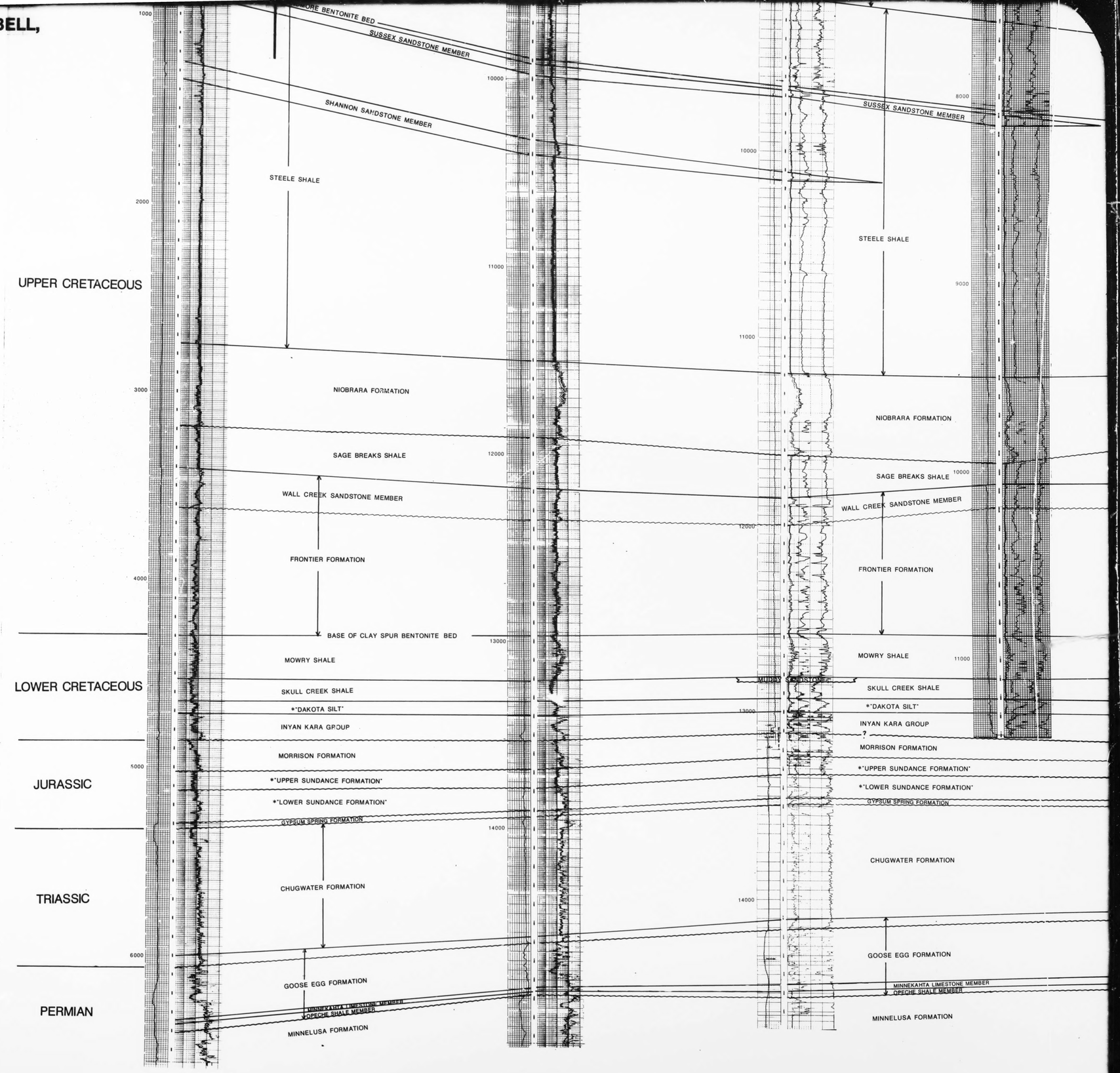
Spontaneous potential curve

Resistivity curves

5000'

Depth of well, in feet, below Kelly Bushing (KB)

Vertical scale 1 inch = 200 feet



SUSSEX SANDSTONE MEMBER

STEELE SHALE

NIOBRARA FORMATION

SAGE BREAKS SHALE

WALL CREEK SANDSTONE MEMBER

FRONTIER FORMATION

MOWRY SHALE

MUDDY SANDSTONE

SKULL CREEK SHALE

*"DAKOTA SILT"

INYAN KARA GROUP

MORRISON FORMATION

*"UPPER SUNDANCE FORMATION"

*"LOWER SUNDANCE FORMATION"

GYPSUM SPRING FORMATION

CHUGWATER FORMATION

GOOSE EGG FORMATION

MINNEKAHTA LIMESTONE MEMBER

OPECHE SHALE MEMBER

MINNELUSA FORMATION

RED BIRD SILTY MEMBER

MITTEN MEMBER

BASE OF ARDMORE BENTONITE BED

GAMMON FERRUGINOUS MEMBER

NIOBRARA FORMATION

CARLILE SHALE

TURNER SANDY MEMBER

POOL CREEK SHALE MEMBER

GREENHORN LIMESTONE

BELLE FOURCHE SHALE

BASE OF CLAY SPUR BENTONITE BED

MOWRY SHALE

MUDDY SANDSTONE

SKULL CREEK SHALE

*"DAKOTA SILT"

INYAN KARA GROUP

MORRISON FORMATION

*"UPPER SUNDANCE FORMATION"

*"LOWER SUNDANCE FORMATION"

GYPSUM SPRING FORMATION

CHUGWATER FORMATION

GOOSE EGG FORMATION

MINNEKAHTA LIMESTONE MEMBER

OPECHE SHALE MEMBER

MINNELUSA FORMATION

PIERRE SHALE

SUSSEX SANDSTONE MEMBER EQUIVALENT